
NATIONAL AERONAUTICS
AND SPACE ADMINISTRATION

NASA-09650 (June 2004)
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SECTION 09650

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SECTION 09650

RESILIENT FLOORING
06/04

NOTE: Delete, revise, or add to the text in this
section to cover project requirements. Notes are
for designer information and will not appear in the
final project specification.

This broadscope section covers sheet-vinyl flooring,
vinyl composition tile, rubber tile, stair treads,
vinyl or rubber base, vinyl reducer strips, and
vinyl feature strips.

PART 1 GENERAL

1.1 REFERENCES

NOTE: The following references should not be
manually edited except to add new references.
References not used in the text will automatically
be deleted from this section of the project
specification.

The publications listed below form a part of this section to the extent
referenced:

ASTM INTERNATIONAL (ASTM)

ASTM B 221/B 221M	(2003) Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes
ASTM F 1066	(1999) Standard Specification for Vinyl Composition Floor Tile
ASTM F 1303	(2004) Sheet Vinyl Floor Covering with Backing
ASTM F 1344	(2000) Standard Specification for Rubber Floor Tile

U.S. GENERAL SERVICES ADMINISTRATION (GSA)

FS SS-T-312	(Rev B; Notice 1) Tile, Floor; Asphalt, Rubber, Vinyl, Vinyl-Asbestos
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FS SS-W-40

(Rev A; Int Am 1, Notice 1) Wall Base:
Rubber, and Vinyl Plastic

FS ZZ-T-001237

Tread, Stair, Flexible and Semi-Rigid Type
Rubber and Vinyl

1.2 SUBMITTALS

NOTE: Review submittal description (SD) definitions
in Section 01330, "Submittal Procedures," and edit
the following list to reflect only the submittals
required for the project. Submittals should be kept
to the minimum required for adequate quality
control. Include a columnar list of appropriate
products and tests beneath each submittal
description.

The following shall be submitted in accordance with Section 01330,
"Submittal Procedures," in sufficient detail to show full compliance with
the specification:

SD-03 Product Data

Manufacturer's catalog data shall be submitted for the following
items:

Vinyl Composition Tile
Sheet-Vinyl Flooring
Rubber Tile
Base
Vinyl Reducer Strips
Vinyl Feature Strips
Substrate Primer/Sealer
Adhesive
Edge Strips
Stair Treads
Risers

SD-04 Samples

Samples of Manufacturer's Standard Color Charts shall be submitted
in accordance with paragraph entitled, "Manufacturer's
Information," of this section.

SD-08 Manufacturer's Instructions

The following items shall be submitted in accordance with
paragraph entitled, "Manufacturer's Information," of this section.

Manufacturer's Instructions
Preventive Maintenance and Inspection

1.3 DELIVERY, HANDLING, AND STORAGE

Materials shall be delivered to the project site in their original packages
or containers bearing labels clearly identifying the manufacturer, brand

name, and quality or grade.

Materials shall be stored in their original unbroken packages or containers in the area in which they will be installed.

1.4 MANUFACTURER'S INFORMATION

Manufacturer's Standard Color Charts shall be submitted for resilient flooring showing the manufacturer's recommended color and finish selections.

Manufacturer's Instructions shall be submitted showing printed instructions covering installation of resilient flooring systems.

Preventive Maintenance and Inspection shall be submitted showing the resilient flooring material manufacturer's recommended cleaning and application methods.

PART 2 PRODUCTS

2.1 MATERIALS

2.1.1 General Requirements

Resilient flooring, base, and edging strips shall be the manufacturer's standard color range.

2.1.2 Vinyl Composition Tile

Tile shall conform to ASTM F 1066, Composition I, 12 by 12 inches 305 by 305 millimeter square, Class [1] [2] [3]. Thickness shall be 1/8 inch. 3 millimeter.

NOTE: Plastic is one of the materials listed in the EPA's Comprehensive Procurement Guidelines (CPG) (<http://www.epa.gov/cpg/>). If the Architect/Engineer determines that use of certain materials meeting the CPG content standards and guidelines would result in inadequate competition, do not meet quality/performance specifications, are available at an unreasonable price or are not available within a reasonable time frame, the Architect/Engineer may submit written justification and supporting documentation for not procuring designated items containing recovered material. Written justification may be submitted on a Request for Waiver Form to the NASA Environmental Program Manager for approval. The Request for Waiver Form is located in the NASA Procedures and Guidelines (NPG 8830.1) (<http://nodis3.gsfc.nasa.gov>).

[Plastic shall contain 90-100 percent of total recovered materials.]

2.1.3 Sheet-Vinyl Flooring

Sheet-vinyl flooring shall conform to ASTM F 1303, Type II, Grade A.

Minimum overall thickness shall be 0.090-inch. 2.3 millimeter.Flooring

shall be suitable for above-grade, on-grade, and below-grade applications.

2.1.4 Rubber Tile

Rubber tile shall conform to ASTM F 1344, 12 by 12 inches 305 by 305 millimeter square. Thickness shall be 1/8 inch. 3 millimeter.

NOTE: Rubber floor tile is one of the materials listed in the EPS's Comprehensive Procurement Guidelines (CPG) (<http://www.epa.gov/cpg/>). If the Architect/Engineer determines that use of certain materials meeting the CPG content standards and guidelines would result in inadequate competition, do not meet quality/performance specifications, are available at an unreasonable price or are not available within a reasonable time frame, the Architect/Engineer may submit written justification and supporting documentation for not procuring designated items containing recovered material. Written justification may be submitted on a Request for Waiver Form to the NASA Environmental Program Manager for approval. The Request for Waiver Form is located in the NASA Procedures and Guidelines (NPG 8830.1) (<http://nodis3.gsfc.nasa.gov>).

[Rubber floor tile shall contain 90-100 percent of post consumer content.]

2.1.5 Base

Base shall be vinyl composition and the selected style conforming to FS SS-W-40.

[Rubber floor tile shall contain 90-100 percent of post consumer content.]

Base, exclusive of corners, shall be furnished in [12-foot 3700 millimeter lengths] [rolls not less than 50 feet 15 meter long]. Each wing of corners shall be not less than 2 inches 50 millimeterlong.

2.1.6 Vinyl Reducer Strips

Vinyl reducer strips shall conform to FS SS-T-312.

Strips shall be 1-inch 25 millimeter wide, in the lengths required to minimize joints, and 1/8-inch 3 millimeter thick.

2.1.7 Vinyl Feature Strips

Vinyl feature strips shall conform to FS SS-T-312 and shall be 1/8-inch 3 millimeter thick.

2.1.8 Substrate Primer/Sealer

Substrate primer sealer shall comply with the resilient flooring manufacturer's recommendations for the type and location of substrate and the end use of the area to be covered. Primer/sealer shall be nonstaining to the resilient flooring.

2.1.9 Adhesive

Emulsion adhesive shall be used with emulsion primer. Cutback adhesive shall be used with cutback primer. Adhesive shall be nonstaining to the resilient flooring. Adhesive for stair treads shall be the type recommended by the manufacturer.

2.1.10 Edge Strips

Edge strips shall be extruded-aluminum alloy conforming to ASTM B 221/B 221M, Temper F, 1/8-inch 3 millimeter thick and 3/4-inch 20 millimeter wide, butt type, and [rounded] [beveled] on the exposed edge. Strips shall be installed in accordance with the manufacturer's recommendation.

2.1.11 Stair Treads

Stair treads shall conform to , composition [A] [B], with [square] [curve] nosing. Minimum tread thickness shall be 1/4 inch 6 millimeter at front edge, a full 3/16 inch 5 millimeter through the design, then down to 1/8-inch 3 millimeter at the back edge.

2.1.12 Risers

Risers shall conform to FS ZZ-T-001237, Style [A] [B]. Thickness shall match tile thickness.

PART 3 EXECUTION

3.1 CONDITIONS AT BUILDING

Surfaces to receive stair-tread materials shall be maintained at an ambient temperature of at least [70] [21] [_____] degrees F C for at least [48] [_____] hours prior to, during, and for [48] [_____] hours after completion of the stair-tread installation.

Specified materials shall be installed only when normal temperature and humidity conditions approximate the interior conditions of the building that will exist when occupied.

Installation of the resilient flooring shall be deferred until other work that might cause damage to flooring has been completed.

3.2 PREPARATION OF SUBSTRATE SURFACES

Surfaces to receive specified materials shall be clean, smooth, cured, and free from materials detrimental to achieving the required bond.

Concrete substrate surfaces shall be coated completely with a primer/sealer in accordance with the resilient-material manufacturer's recommendations.

Cracks, rough areas, joints, and other surface defects in the concrete shall be filled with a material recommended by the stair-tread manufacturer. Ridges, trowel marks, and other surface projections shall be ground smooth.

Before the start of stair-tread application, substrate surfaces shall be tested for moisture content to ensure against a moisture invasion of the adhesive.

Moisture test for concrete stairs to which stair treads are to be applied shall be performed as follows:

After the concrete has been cleaned, small patches of the adhesive to be used shall be spread evenly and allowed to dry or set overnight. When set adhesive can be peeled easily from the concrete, the test shall be repeated at intervals until the adhesive adheres tightly. Stair treads shall not be installed until the adhesive adheres tightly to the concrete.

3.3 APPLICATION OF FLOORING AND BASE

Application of flooring shall be in accordance with the flooring manufacturer's recommendations.

3.4 APPLICATION OF VINYL STRIPS

Vinyl reducer strips shall be applied in conjunction with the specified flooring materials where required. Reducer strips shall be tightly butted to the resilient flooring with the fewest possible seams, in accordance with the manufacturer's instructions.

Vinyl feature strips shall be applied in conjunction with the flooring materials and patterns. Feature strips shall be tightly butted to the resilient flooring with the fewest possible seams, as approved by the manufacturer.

3.5 APPLICATION OF EDGE STRIPS

Edge strips shall be installed at exposed edges of resilient flooring and where thresholds are not required. Top surface shall be flush with resilient flooring. Strips shall be secured to the subfloor as recommended by the manufacturer.

3.6 CLEANING AND PREPARATION

Following application of flooring, the Contractor shall thoroughly clean and prepare the floor.

Stair-tread surfaces shall be cleaned of foreign substances in accordance with the stair tread manufacturer's cleaning instructions.

3.7 APPLICATION OF STAIR TREADS

Application of the adhesive and stair treads shall be in accordance with the manufacturer's recommendations.

3.8 ACCEPTANCE PROVISIONS

3.8.1 Rejection

Floor surfaces will be rejected when colors or patterns do not match the color or pattern of approved samples, and when chipped, cracked, stained, or mismatched stair treads occur.

3.8.2 Repairing

Damaged and unacceptable portions of the completed work shall be removed and replaced with new work to match adjacent surfaces at no additional cost

to the Government.

3.8.3 Cleaning

Surfaces of the work, and adjacent surfaces soiled as a result of the work, shall be cleaned. Equipment, surplus materials, and rubbish from the work shall be removed from the site.

3.9 EXTRA MATERIAL

Upon completion of the vinyl composition tile flooring installation, spare tiles of each type, color, and pattern from the same lot as those installed shall be furnished at the rate of [five] [_____] tiles for each [1,000] [_____] tiles or fraction thereof installed.

Upon completion of the sheet vinyl flooring installation, extra material of each type, color, and pattern from the same lot as installed shall be furnished at the rate of [1.0] [_____] percent of the area installed.

Upon completion of the stair-tread installation, spare treads of each type, color, and pattern from the same lot as those installed shall be furnished at the rate of [1] [_____] tread for each [50] [_____] treads installed.

-- End of Section --